

## **REMARKS**

The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Claims 1-86, 93-95 are pending in this case. Claims 27-48, 68, 82, 86, 95 have been objected to. Claims 1-30, 32-34, 36, 65-67, 80-86, 93-95 have been rejected under 35 U.S.C. § 112, second paragraph. Claims 20-24, 29-31, 35-37, 40-41, 47-48, 60-64, 68-71, 79-80, 82-93, 85, 93 have been rejected under 35 U.S.C. § 102(a). Claims 49-59 have been allowed. Independent claims 1, 20, 31, 49, 60, 80, 83, 93-95 and dependent claims 16-17, 27-30, 32-37, 65-68, 82, 86 have been amended. Claims 22, 24, 87-92, 96-99 have been cancelled. New claims 100-102 have been added.

### **Affirmation of Election**

Applicant affirms the provisional election made without traverse on September 26, 2005 to prosecute the invention of Group I, claims 1-86, 93-95. Claims 87-92, 96-99 have been canceled as being drawn to a non-elected invention.

### **Response to Claim Objections**

The Examiner objected to claims 27-48, 68, 82, 86 and 95 due to several informalities. In response, Applicant has amended claims 16-17, 27-31, 66-68, 82, 86, 95 accordingly. Therefore, the Examiner is respectfully requested to withdraw the claim objections and requests favorable reconsideration.

### **Response to 35 U.S.C. § 112, Second Paragraph Rejections**

The Examiner rejected claims 1-30, 32-34, 36, 65-67, 80-86, 93-95 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The amended claims now feature language which make it clear what the subject matter is that the Applicant regards as the invention. Applicant believes that claims 1-30, 32-34, 36, 65-67, 80-86, 93-95 overcome the Examiner's rejection based on § 112, second paragraph grounds. The Examiner is respectfully requested to withdraw the § 112, second paragraph rejection.

### **Response to 35 U.S.C. § 102(a) Rejections**

The Examiner rejected claims 20-24, 29-31, 35-37, 40-41, 47-48, 60-64, 68-71, 79-80, 82-93, 85, 93 under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 6,078,591 (“Kalkunte et al.”). Applicant respectfully submits that the prior art fails to disclose or suggest at least a method of accessing a network channel by a station comprising the steps of dividing contention for channel access into a plurality of N windows, wherein each window corresponds to one of N priority levels, contending for said channel only during a window matching the priority of a particular transmission, and utilizing a short fast carrier detect (FCD) symbol having a high false alarm rate to predict the start of a transmission from another station on said channel. Therefore, Applicant respectfully traverses the rejections and request favorable reconsideration.

Applicant has reviewed the cited art and respectfully submits that the art fails to disclose or suggest the Applicant’s claimed invention, and fails to teach each and every element and limitation of the claims rejected herein. Therefore Applicant respectfully traverses the rejections and requests favorable reconsideration.

While continuing to traverse the Examiner’s rejections, Applicant, in order to expedite the prosecution, has chosen to clarify and emphasize the crucial distinctions between the present invention and the devices of the patents cited by the Examiner. Specifically, representative claim 20 has been amended to include a method of accessing a channel in a communication transceiver coupled to a communications channel, said method comprising the steps of dividing contention for access to said channel into one or more contention windows, each contention window assigned a priority and subdivided into a plurality of backoff time slots, deferring zero or more contention windows until arrival of a contention window whose priority corresponds to the priority of a particular transmission, initializing a backoff counter with a backoff count equal to a random number of backoff time slots, decrementing said backoff counter while said channel is idle, and attempting to reserve said channel upon expiration of said backoff counter.

Kalkunte et al. teaches a mechanism for obtaining better channel access for high priority transmissions mainly by reducing access latency. The mechanism is operative to modify collision delay intervals in a network node in order to overcome a detected capture effect in a half-duplex network. A network interface having a media access control (MAC) selectively modifies the collision delay interval based on detected capture effect. In one implementation, a node that has been locked out resets its attempt counter to become more aggressive in contending

for the media. In applications requiring a guaranteed access, the attempt counter is reset and the collision delay interval is forced to zero slot times to attempt immediate access of the media following a collision. If the network includes multiple applications requiring guaranteed access, a node having encountered collisions switches from normal operation under the truncated binary exponential backoff (TBEB) algorithm to a shifted TBEB operation. If the node has captured the media, the node increases its attempt counter by a prescribed value to provide a less aggressive contention during collision mediation.

It is submitted that the method taught by Kalkunte et al. is substantially different from that of the present invention. Kalkunte et al. at col. 6, lines 5-65 teaches randomly selecting a slot time interval based on the number of access attempts. In particular, the mechanism

“determines the slot time interval based on an integer randomly selected from a range of integers, where the range of integers is calculated from an exponential number of access attempts.” See col. 6, lines 44-48.

Transmission is allowed after the calculated number of slot times and only if no receive carrier is sensed. The mechanism maintains an attempt counter to track the number of transmission attempts.

In contrast, the mechanism of the present invention teaches an access method that divides contention for channel access into a **plurality of windows**, wherein each window corresponds to a **particular priority level**. Stations **wait** to contend for the channel until the contention window arrives that corresponds to the priority of the particular transmission and only then attempts to reserve the channel. Reservation of the channel itself only occurs after expiration of a backoff counter. These features are neither taught nor suggested by the Kalkunte et al. reference.

The method of Kalkunte et al. provides for the handling of priority data. Data can be either priority or not priority, without any mention of multiple priority levels. If data is not priority, then the MAC performs conventional collision mediation using the truncated binary exponential backoff (TBEB) algorithm. If the data is priority data, the MAC determines a collision delay interval as a function of the number of collisions previously encountered. If the number of collision previously encountered is less than a predetermined value, the collision delay interval is randomly set to zero or one time slot. See col. 9, line 57 to col. 10, line 9.

It is submitted that the priority contention mechanism of the present invention is substantially **different** from the Kalkunte et al. mechanism of randomly selecting a time slot based on the number of collisions previously encountered. The priority contention mechanism of the present invention handles priority by having a transmission **wait** for a contention period that corresponds to its **assigned** priority. A random backoff is calculated only if the channel is not idle when the corresponding priority contention arrives. In that case, a backoff time is initialized to a random number which is counted down within the corresponding priority contention window. After the counter reaches zero, the station attempts to reserve (or acquire) the channel.

It is believed that amended independent claims 20, 31, 60, 80, 83, 93 and new independent claim 100 overcome the Examiner's § 102(a) rejection based on the Kalkunte et al. reference as each of the independent claims recite the limitation of establishing priority contention windows which is not taught or suggested by Kalkunte et al. In addition, it is believed that dependent claims 21-24, 29-30, 35-37, 40-41, 47-48, 61-64, 68-71, 79, 82, 85, 93 also overcome the Examiner's rejection based on § 102(a) grounds. The Examiner is respectfully requested to withdraw the rejection based on § 102(a).

### **Response to 35 U.S.C. § 103(a) Rejections**

The Examiner rejected claims 26-28, 38-39, 43-46, 73-78, 81, 84, 94-95 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,078,591 ("Kalkunte et al.") in view of U.S. Patent No. 6,625,162 ("Myojo et al."). To reject the claims as obvious under 35 U.S.C. §103(a) there must be some suggestion or motivation, either in the references themselves or in the prior art, to modify or combine teachings. Furthermore, the prior art references must teach all the claimed limitations. Application as reviewed the cited art and respectfully submits that the art fails to disclose or suggest the Applicant's claimed invention, and fails to teach each and every element and limitation of the claims rejected herein. Therefore Applicant respectfully traverses the rejections and requests favorable reconsideration.

Applicant respectfully submits that the prior art fails to disclose or suggest at least a method of accessing a network channel by a station comprising the steps of dividing contention for channel access into a plurality of N windows, wherein each window corresponds to one of N priority levels, contending for said channel only during a window matching the priority of a particular transmission, and utilizing a short fast carrier detect (FCD) symbol having a high false

alarm rate to predict the start of a transmission from another station on said channel. Therefore, Applicant respectfully traverses the rejections and request favorable reconsideration.

Myojo et al. teaches a communication system including plural communication apparatuses that communicate each other using a single communication path, the state of the communication path is detected for communication. If the communication path is busy, a first control method is performed for controlling access to the communication path using a back off time selected at random. A second control method secures the communication path by transmitting and receiving the predetermined signal at transmission of a signal so as to control access to the communication path. In accordance with the kind of the signal to be transmitted, the first or the second control method is selected for communication. Thus, plural communication apparatuses can perform efficient communication.

The combination of Kalkunte et al. and Myojo et al. would not result in the claimed invention. The Examiner has improperly combined Kalkunte et al. and Myojo et al. in an attempt to arrive at the claimed invention. The combination suggested by the Examiner fails to teach or suggest all the claims limitations. In particular, the combination of Kalkunte et al. and Myojo et al. fails to teach the step of dividing channel access contention into a plurality of contention windows each corresponding to a particular priority level.

Independent claims 94-95 recite the limitation of establishing priority contention windows. Based on the arguments presented above, it is submitted that Kalkunte et al. and Myojo et al. do not anticipate nor suggest claims 94-95 as discussed above. Applicant submits that claims 94-95 are not obvious in light of the combination of Kalkunte et al. and Myojo et al.

Claims 26-28 depend from claim 1, claims 38-39, 43-46 depend from claim 31, claims 73-78 depend from claim 60, claim 81 depends from claim 80, and claim 84 depends from claim 83. Accordingly, based on the arguments presented above, Applicant also submits that claims 26-28, 38-39, 43-46, 73-78, 81, 84 are not obvious in light of the combination of Kalkunte et al. and Myojo et al. The Applicant respectfully traverses the rejection of claims 26-28, 38-39, 43-46, 73-78, 81, 84, 94-95 and submits that the presently claimed invention including new claims 100-102 are patently distinct over Kalkunte et al. in view of Myojo et al. The Examiner is respectfully requested to withdraw the rejection based on 35 U.S.C. §103(a).

### **Correction of Typographical Errors**

Amendments haven been made to correct grammatical and usage errors in the specification. No new matter has been added to the application by these amendments.

### **Conclusion**

In view of the above amendments and remarks, it is respectfully submitted that independent claims 1, 20, 31, 60, 80, 83, 93-95 and hence dependent claims 2-19, 21-30, 32-59, 61-79, 81-82, 84-86 are now in condition for allowance. Prompt notice of allowance is respectfully solicited.

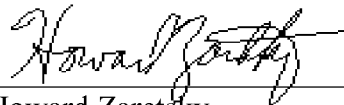
In light of the Amendments and the arguments set forth above, Applicant earnestly believes that they are entitled to a letters patent, and respectively solicit the Examiner to expedite prosecution of this patent applications to issuance. Should the Examiner have any questions, the Examiner is encouraged to telephone the undersigned.

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Respectfully submitted,

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